

### **3.11 Permit Requirements**

#### **3.11.1 General**

The Hydraulics and Drainage Section is involved in the following environmental permit applications.

- Floodplain Management Certification
- Stream Channel Encroachment Permits
- Water Diversion Permits
- Dam Construction Permits

*All environmental permit applications are coordinated through the Department's Office of Environmental Planning. The Hydraulics and Drainage Section offers technical assistance in the review and preparation of the permits specified above. The permit submittals to ConnDEP are performed through the OEP.*

The permit applications for projects administered by the Consultant Design Section are typically prepared by the consultant and forwarded to the Hydraulics and Drainage Section for review. For State Design projects, the designer prepares the permits or requests that the application or portions thereof be prepared by the Hydraulics and Drainage Section. The ConnDEP permit application package includes instructions on preparing the various permit applications.

The intent of the permit application review by the Hydraulics and Drainage Section is to ensure that it is consistent with ConnDEP guidelines and is in agreement with the design prior to it being forwarded to ConnDEP. The permit process is discussed in several ConnDOT and ConnDEP guidelines. The designer should review and be familiar with them prior to the start of the design. They include the following:

- **Consulting Engineers Manual** – Chapter 800
- **Water Resources Coordination and Permit Processing Manual by ConnDOT Office of Environmental Planning** - See Chapter 4, (State Permits) and Chapter 6 (The Process) which includes a flowchart illustrating the permit process and how it relates to the various stages of design.
- **Hydraulic Analysis Guidance (DEP-IWRD-GUID-001)** - ConnDEP publication intended as a supplemental guideline for preparing hydraulic analyses for various permit applications.

These are good sources of information for those not familiar with the process or those in need of a review. Early coordination with ConnDEP and familiarity with permit requirements is stressed throughout this Drainage Manual. Typically, a State project cannot be advertised until all permits are in place and certified. Therefore, submitting applications late in the design process could substantially delay the project schedule.

#### **3.11.2 Floodplain Management Certification**

Floodplain Management involvement may be related to proposed work either in the floodplain or in the floodway. The definition of both of these is discussed in the Legal Chapter of this manual, (Chapter 2). These limits are depicted on FEMA mapping. The limits of a floodplain

are defined by the 100-year water surface elevation of the watercourse. The limits of a floodway are defined by a regulatory water surface elevation. A FEMA hydraulic water surface profile analysis is used to establish the limits of the floodway.

**Roadway Impacts...**Floodplain Management involvement for a roadway design project is typically attributed to work being proposed in a floodplain of a watercourse that conveys a drainage area of 259 ha (1.0 sq. mi.) or greater. Associated impacts may include but are not limited to fill being proposed in the floodplain, a storm drainage outlet discharging drainage into a floodplain or any activity on a roadway that is within the regulatory limits (Zone A) as depicted on the FEMA mapping. A hydraulic analysis is typically not required unless the amount of fill proposed to be placed within a floodplain is substantial. The floodplain impacts should be minimized as much as possible.

Fill within an established floodway is **strongly** discouraged. ConnDEP may require a hydraulic analysis if there is concern with substantial impacts to the floodway (even if a cross culvert is not being proposed for the project).

**Structure Impacts...**The Floodplain Management documentation requirements for a structure differ from a roadway project, as there may be considerably greater impacts attributed to a new structure spanning a watercourse. A hydraulic analysis needs to be prepared not only for the design of the structure but also for ConnDEP to ensure that an unacceptable increase in the water surface elevation is not created by the new structure. The proposed activities associated with the construction of the structure must comply with ConnDEP regulations. The Hydraulic Analysis Guidance referenced in Section 3.5.2 above is conducive to understanding the requirements and necessary steps for certification. The limits of the FEMA floodplain and floodway should be shown on the project plans to aid in determining potential impacts.

**Flood Management General Certification** is available for minor activities located within the regulated floodplain. This general certification granted by ConnDEP can be obtained for certain activities in lieu of an individual Flood Management permit application. The Hydraulics and Drainage section is responsible for reviewing all requests and issuing approval. A description of the minor activities that would qualify for general certification can be obtained from the offices of Hydraulics and Drainage or Environmental Planning.

When seeking Flood Management Certification under the general permit, at a minimum the following information should be provided:

- Request memorandum "Request for FM General Certification Approval"
- Project description with a statement of hydraulics and drainage involvement
- Location plan
- Design plan
- Copy of flood map (FEMA map panel for area of concern)
- Justification of why the request qualifies under FM General Certification
- Available supporting reports, computations, etc.

### 3.11.3 Stream Channel Encroachment Line Permit

Stream Channel Encroachment Lines are established by the State for many flood prone rivers and watercourses. Any activity riverward from the established lines requires a permit from ConnDEP. A listing of regulated areas may be obtained from ConnDEP's Bureau of Water

Management, Inland Water Resources Division. Copies of the maps are on file with the town clerks of the respective towns, the Hydraulics and Drainage Section, and the office of ConnDEP's Inland Water Resources Division.

**Roadway Impacts...**Unlike the Flood Management Certification process where involvement is limited to the 100-year water surface elevation of the watercourse, Stream Channel Encroachment Lines have no limit with respect to elevation. For example, should a project involve work being performed on a travelway that is situated well above the 100 year water surface elevation of an adjacent river, and the project falls within the limits of the SCEL, a permit will be required.

**Structure Impacts...**A project that includes a structure within these regulated SCEL limits requires a hydraulic analysis. The Stream Channel Encroachment water surface model is used incorporating the project's proposed condition. Hydraulic reports used to establish the encroachment lines are also available for review at the ConnDEP Inland Water Resources Division. **Note however that this hydraulic model is independent from the hydraulic model used to design the structure and from that described for Floodplain Management certification.**

#### **3.11.4 Water Diversion Permits**

The need for a water diversion permit is addressed in the Water Resources Coordination and Permit Processing Manual and in Section 804.07 of the Consulting Engineers Manual.

#### **3.11.5 Dam Safety Permits**

A Dam Safety Permit is required for any work on or affecting a dam, dike, or similar structure subject to DEP jurisdiction. Under State regulations, these structures are broadly defined as "barriers of any kind whatsoever which are capable of impounding or controlling the flow of water" and, by breaking away or otherwise failing, could endanger life or property. Chapter 4 of the Water Resources Coordination and Permit Processing Manual and Section 10.5 of this manual discuss this permit application.